

**REMARKS**

By this Amendment, claims 1, 7, 9, and 14 are amended. Claims 1-16 are pending in this application. No new matter is presented in this Amendment.

The Patent and Trademark Office (PTO) objects to the drawings under 37 CFR 1.83(a) asserting that neither a base mounted directly on a circuit board, as recited in claim 1, nor a “single heat dispersing gyroidal flange,” as recited in claim 14, are shown in the drawings. Claims 1 and 14 are amended to remove the elements in question. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

The PTO objects to claims 7 and 13 because of informalities. Specifically, the PTO asserts that the phrase “a LED,” as recited in claim 7 is incorrect. Applicant amends claims 1 and 9 to replace the phrase “a LED” with the term “an LED” to obviate the objection thereto.

Applicant further amends claim 1 to replace the phrase “circuit boards are” with the phrase --the circuit board is-- to clarify the claim as to the number of circuit boards disclosed.

The PTO further objects to claim 13, asserting that there is insufficient antecedent basis for the term “the heat sink.” Applicant amends claim 9, from which claim 13 depends, adding “a heat sink” to provide antecedent basis for the reference thereto in claim 13. Accordingly, withdrawal of the objections to claims 7 and 13 are respectfully requested.

In addition, the PTO rejects claim 1 under 35 U.S.C. §112, second paragraph, asserting that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Specifically, the Examiner asserts that claim 1 recites claim elements that are contradictory. The Applicant submits that the claim element “wherein the base is mounted directly on a circuit board” was added in the response filed September 15, 2006 and incorrectly characterizes the Applicant’s invention. Therefore, this feature is herewith deleted. Accordingly, withdrawal of the 35 U.S.C. §112, second paragraph rejection of claim 1 is respectfully requested.

The Office Action rejection of claims 1, 3, 4, 6, 7, and 9 under 35 U.S.C. §102(b) over the Applicant’s admitted prior art (AAPA) is respectfully traversed. A rejection based on 35 U.S.C.

§102 requires every element of the claim to be included in the reference, either directly or inherently.

Independent claim 1 has been amended to more clearly recite the Applicant's disclosed invention and is not intended to narrow the scope of the recited claims. As such, independent claim 1 recites, *inter alia*, at least one led chip directly mounted on a base of high heat conductivity wherein the LED chip is connected to an applied power through a circuit board, and the circuit board is provided on, or around, the base. The AAPA does not disclose, teach or suggest the LED and LED lamp as described above.

Furthermore, as submitted above, the feature wherein "the base is mounted directly on a circuit board," was an incorrect characterization of the Applicant's invention and has allowed the Examiner to incorrectly assert that the AAPA discloses all the features of the LED and LED lamp recited in claim 1. As noted above, this feature is deleted from independent claim 1.

The AAPA appears only to disclose, in Fig. 1, a circuit board 106 on which a base is mounted. This configuration fails to disclose, teach, or suggest the Applicant's structure wherein the circuit board is "provided on or around the base," as recited in claim 1.

Accordingly, because the AAPA does not disclose, teach or suggest each and every limitation recited in claim 1, the rejection of claim 1 under 35 U.S.C. §102(b) is improper. Applicant respectfully submits, therefore, that independent claim 1 is patentable over the AAPA.

The Office Action further reject claims 2, 5, 8-16 under 35 U.S.C. §103(a) over the AAPA singularly, or in view of one or more of U.S. Patent Application No. 2002/0071275 to Worgan et al. ("Worgan"), U.S. Patent No. 6,220,722 to Begemann, U.S. Patent No. 6,505,301 to Lowery, U.S. Patent No. 6,827,470 to Sagal et al. ("Sagal"), and U.S. Patent No. 3,936,686 to Moore. These rejections are respectfully traversed.

The Examiner acknowledges at page 5 of the Office Action that the AAPA fails to disclose all the features of independent claim 1. The Examiner relies upon the cited references to remedy the deficiencies of the AAPA. The Applicant respectfully disagrees.

Applicant respectfully submits that, as discussed above, independent claim 1 is patentable

over the AAPA. Similar to the argument presented above, the Applicant further submits that Worgan, Begemann, Lowery, Sagal, and Moore likewise fail to disclose at least one LED chip being mounted directly on a base of high heat conductivity, and wherein a circuit board is provided on or around the base, as recited in independent claim 1.

Worgan, for example, only appears to disclose, at page 2, lines 20-24, "a light comprising a base for mounting the light, a chassis upstanding from the base, a circuit board mounted upon an outer face of the chassis and at least one solid state emitter mounted upon the circuit board." Applicant respectfully submits that unlike the Applicant's LED, wherein the at least one solid state emitter is mounted directly on the base, Worgan only discloses a solid state emitter mounted to a circuit board and it is the circuit board of Worgan that is mounted to the chassis.

Indeed, if one were to concede that the base, as recited in claim 1, is disclosed by the chassis of Worgan, Applicant respectfully submits that according to Fig. 3 of Worgan, solid state emitters 24 and 26, mounted to circuit board 11, could not, in any disclosed embodiment, be directly mounted to the chassis 8. Therefore, nowhere does Worgan disclose, teach or suggest, at least one LED chip being mounted directly on a base of high heat conductivity, as recited in independent claim 1.

Applicant further submits that an LED chip mounted directly on the base of high conductivity, as recited in claim 1, has the beneficial effect of efficient escape of heat created by the LED. Claim 1 is further differentiated from the applied art in that the circuit board disposed on or around the base facilitates the connection between the at least one LED chip and a dense arrangement of chips.

Accordingly, because Worgan does not disclose, teach or suggest each and every limitation recited in claim 1, the rejection of claim 2, 9, and 13 that depend from claim 1 is improper. The Applicant respectfully submits that Begemann, Lowery, Sagal, and Moore likewise fail to disclose all features of independent claim 1.

Therefore, Applicant respectfully submits that any combination of the applied references fails to disclose, teach or suggest all the features recited in claim 1. Accordingly, claim 1 is

patentable over Worgan, Begemann, Lowery, Sagal, and Moore. Claims 2, 5, 8-16 are likewise patentable over the applied references at least in view of their dependence on claim 1. Withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout prosecution); (c) satisfy a requirement of form asserted in the previous Office Action; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because [e.g. they are made in response to arguments raised in the final rejection]. Entry of the amendments is thus respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-16 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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